

What is claimed is:

1. A pressure sensitive sensor for detecting pressure by electrical conduction caused by pressing into contact with each other a first electrode member¹ and a second electrode member² provided in a spaced arrangement in an unpressed state, said pressure sensitive sensor comprising:

an insulative member³ provided between said first electrode member and said second electrode member, said insulative member including an insulating material that allows electrical contact between said first electrode member and said second electrode member through a gap portion in its mesh when pressed; and insulates said first electrode member and said second electrode member when not pressed.

2. The pressure sensitive sensor according to claim 1,

wherein said insulative member includes a net braid member provided between said first electrode member and said second electrode member, said net braid member allowing electrical contact between said first electrode member and said second electrode member through a gap portion in its mesh when pressed, and insulating said first electrode member and said second electrode when not pressed.

3. The pressure sensitive sensor according to claim 2,

wherein said net braid member is formed by knitting a plurality of yarn strands.

4. The pressure sensitive sensor according to claim 3,

wherein said yarn strands each include an insulating fiber coated on its surface with an insulating resin or rubber.

5. The pressure sensitive sensor according to claim 3,

wherein said yarn strands each include an insulating fiber impregnated with an insulating resin or rubber.

6. The pressure sensitive sensor according to claim 1,

wherein said first electrode member includes an elastic electroconductive tube comprising an elastic electroconductive material, said second electrode member includes a central electrode member having a long narrow bendable shape provided inside said elastic electroconductive tube, and said insulative member is provided between said central electrode member and said elastic electroconductive tube so that said net braid member covers an outer peripheral surface of said central electrode member.

7. The pressure sensitive sensor according to claim 6,

wherein said central electrode member is restorable to its shape from tensile and bending deformation, said central electrode member being provided with a central member having a long narrow shape and having at least an outer elastic peripheral portion and an electroconductive metal wire wound on the outer periphery of said central member in a coil.

8. The pressure sensitive sensor according to claim 7,

wherein said central electrode member is provided with an electroconductive coating layer including one of an electroconductive resin and an electroconductive rubber provided on the inside of said insulative member so that an outer peripheral surface of said central member is covered underneath said metal wire.

9. The pressure sensitive sensor according to claim 6,

wherein said elastic electroconductive tube is formed by extrusion molding said elastic electroconductive material on an outer peripheral surface of said central electrode member and covering said insulative member.

10. The pressure sensitive sensor according to claim 6,

wherein said central electrode member is constructed by one of twisting and bundling a plurality of single metal wires.

11. The pressure sensitive sensor according to claim 6,

wherein said central electrode member comprises a single metal wire.

12. The pressure sensitive sensor according to claim 7,

wherein said electroconductive metal wire wound on said outer periphery of said central member in a coil is wound tightly around said central member and is embedded into said outer periphery of said central member.

13. The pressure sensitive sensor according to claim 12,

wherein said electroconductive metal wire is embedded in said outer periphery of said central member to substantially half the diameter of said electroconductive metal wire.

14. The pressure sensitive sensor according to claim 1,

wherein said first electrode member includes a first plate comprising an elastic electroconductive material, said second electrode member includes a second plate comprising an elastic electroconductive material, and said insulative member is provided between said first plate and said second plate.

15. The pressure sensitive sensor according to claim 14,

wherein said first and second electrode members are restorable to their shapes from tensile and bending deformation.

16. The pressure sensitive sensor according to claim 14,

wherein said insulative member includes a net braid member provided between said first electrode member and said second electrode member, said net braid member allowing electrical contact between said first electrode member and said second electrode member through a gap portion in its mesh when pressed, and insulating said first electrode member and said second electrode when not pressed.

17. A method of making a pressure sensitive sensor for detecting pressure by electrical conduction caused by pressing into contact with each other a first electrode

member and a second electrode member provided in a spaced arrangement in an unpressed state, said method comprising:

providing an insulative member between said first electrode member and said second electrode member, said insulative member including an insulating material that allows electrical contact between said first electrode member and said second electrode member when pressed, and insulates said first electrode member and said second electrode when not pressed.

18. The method of making a pressure sensitive sensor according to claim 17, wherein said insulative member includes a net braid member provided between said first electrode member and said second electrode member, said net braid member allowing electrical contact between said first electrode member and said second electrode member through a gap portion in its mesh when pressed, and insulating said first electrode member and said second electrode when not pressed, said method comprising:

forming said net braid member by knitting a plurality of yarn strands.

19. The method of making a pressure sensitive sensor according to claim 17, said method comprising:

providing a first electrode member including an elastic electroconductive tube,

providing a second electrode member including a central electrode member having a long narrow bendable shape provided inside said elastic electroconductive tube, and

providing said insulative member between said central electrode member and said elastic electroconductive tube so that said insulative member covers an outer peripheral surface of said central electrode member.

20. In combination, an automobile body;
a door; and

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a pressure sensitive sensor according to claim 1, positioned to be actuated when an object is present between said body and said door.

21. In combination, an automobile body;

a seat; and

a pressure sensitive sensor according to claim 1, positioned to be actuated when an object is present on said seat.

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